What we claim is:

1. An organ or biological tissue preservation aqueous cold storage solution comprising:

a prostaglandin having vasodilatory, membrane stabilizing, platelet aggregation prevention upon reperfusion, and complement activation inhibitory properties;

a nitric oxide donor; and

a glutathione-forming agent.

2. The cold storage solution of claim 1 wherein the prostaglandin comprises prostaglandin E1.

3. The cold storage solution of claim 1 wherein the prostaglandin has cellular and organelle membrane stabilization properties and cytoprotective properties.

4. The cold storage solution of claim 1 wherein the nitric oxide donor comprises nitroglycerin.

5. The cold storage solution of claim 1 wherein the glutathione-forming agent comprises N-acetylcysteine.

6. The cold storage solution of claim 1 further comprising potassium lactobionate, KH_2PO_4, $MgSO_4$, and raffinose.

7. The cold storage solution of claim 1 further comprising adenosine, allopurinol, and pentastarch.

8. The cold storage solution of claim 1 further comprising NaCl and KOH.

9. The cold storage solution of claim 1 wherein the prostaglandin comprises about 100-5,000mcg/L prostaglandin E1, the nitric oxide donor comprises about 1-10mg/L nitroglycerin, and the glutathione-forming agent comprises about 0.1-4mg/L N-acetylcysteine, further comprising:

about 50-150mM potassium lactobionate;

about 10-40mM KH_2PO_4;

about 2-8mM $MgSO_4$;

about 10-50mM raffinose;

about 1-20mM adenosine;

about 1-10mM allopurinol; and

about 40-60g/L pentastarch.

10. The cold storage solution of claim 1 wherein the prostaglandin comprises about 250-3,000mcg/L prostaglandin E1, the nitric oxide donor comprises about 2-7mg/L nitroglycerin, and the glutathione-forming agent comprises about 0.5-2mg/L N-acetylcysteine, further comprising:

about 75-125mM potassium lactobionate;

about 20-30mM KH_2PO_4;

about 3-7mM $MgSO_4$;

about 20-40mM raffinose;

about 2-10mM adenosine;

about 1-5mM allopurinol; and

about 45-55g/L pentastarch.

11. The cold storage solution of claim 1 wherein the prostaglandin comprises about 500mcg/L protaglandin E1, the nitric oxide donor comprises about 5mg/L nitroglycerin, and the glutathione-forming agent comprises 1mg/L N-acetylcysteine, further comprising:

about 100mM potassium lactobionate;

about 25mM KH_2PO_4;

about 5mM $MgSO_4$;

about 30mM raffinose;

about 5mM adenosine;

about 1mM allopurinol; and

about 50g/L pentastarch.

12. The cold storage solution of claim 1 further comprising sterile water.

13. A preserved organ or biological tissue comprising at least one of a cadaveric organ and tissue within a cold storage solution of claim 1 in at least one of a deep hypothermic condition and physiological condition.

14. The preserved organ or biological tissue of claim 13 wherein the cold storage solution is infused into vasculature of at least one of a cadaveric organ, living donor organ, and tissue.

15. The preserved organ or biological tissue of claim 13 wherein the deep hypothermic condition comprises a temperature of about 2-10°C.

16. The preserved organ or biological tissue of claim 13 wherein the physiological condition comprises a temperature of about 37°C.

17. The preserved organ or biological tissue of claim 13 wherein the cold storage solution is cooled to below 10°C.

18. The preserved organ or biological tissue of claim 13 wherein any precipitates in the cold storage solution are removed prior to use.

19. An organ or biological tissue preservation aqueous cold storage solution comprising:

about 100-5,000mcg/L prostaglandin E1;

about 1-10mg/L nitroglycerin;

about 0.1-4mg/L N-acetylcysteine;

about 50-150mM potassium lactobionate;

about 10-40mM KH_2PO_4;

about 2-8mM $MgSO_4$;

about 10-50mM raffinose;

about 1-20mM adenosine;

about 1-10mM allopurinol;

about 40-60g/L pentastarch; and

about 700-900mL sterile water.

20. A method for preserving an organ or biological tissue comprising:

flushing at least one of a cadaveric organ and tissue with a cold storage solution, comprising a prostaglandin with vasodilatory membrane stabilizing, platelet aggregation prevention upon reperfusion, and complement activation inhibitory properties, a nitric oxide donor, and a glutathione-forming agent;

allowing the flushed at least one of a cadaveric organ and tissue to be enveloped in the cold storage solution; and

storing the at least one of a cadaveric organ and tissue in the cold storage solution in at least one of a deep hypothermic condition and physiological condition.

21. The method of claim 20 wherein the flushing comprises:

infusing the solution into vasculature of the at least one of a cadaveric organ and tissue; and exsanguinating the at least one of a cadaveric organ and tissue.

22. The method of claim 20 wherein the storing comprises:

replacing blood in vasculature of the at least one of a cadaveric organ and tissue with the solution.

23. The method of claim 20 further comprising:

replacing the solution with at least blood to return the at least one of a cadaveric organ and tissue to a normothermic condition.

24. The method of claim 20 further comprising:

cooling the solution to below 10°C;

inspecting the cooled solution for precipitates; and

removing any precipitates by filtration.

25. A method of preparing an organ or biological tissue preservation cold storage solution comprising:

providing a solution with sterile water;

adding potassium lactobionate, potassium phosphate, raffinose, adenosine, allopurinol, and pentastarch to the solution; and

mixing prostaglandin E1, nitroglycerin and N-acetylcysteine into the solution.

26. The method of claim 25 further comprising:

mixing the solution until all components are dissolved.

27. The method of claim 25 further comprising:

infusing the pentastarch under pressure through a dialyzing filter;

centrifuging the prostaglandin E1 under hypothermic conditions; and

filtering the centrifuged prostaglandin E1.